

Appendix 2 SAFFIR-SIMPSON HURRICANE SCALE

Category One (Winds of 74-95 miles per hour)

Damage primarily to shrubbery, tree foliage, and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs, and/or storm surge four to five feet above normal tide level. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings. Potential for minimal damage only.

Category Two (Winds of 96-110 miles per hour)

Considerable damage to shrubbery and tree foliage; some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly-constructed signs. Some damage to roofing material of buildings, and/or storm surge of six to eight feet above normal tide level. Coastal roads and low-lying escape routes inland cut by rising water two to four hours before arrival of hurricane center. Potential for moderate damage. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying areas required.

Category Three (Winds of 111 to 130 miles per hour)

Foliage torn from trees; large trees blown down. Practically all poorly-constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed, and/or storm surge nine to twelve feet above normal tide level. Serious flooding at coast and many small structures near coast destroyed. Potential for extensive damage. Larger structures near coast damaged by battering waves and floating debris. Major erosion of beaches. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Evacuations of all residences within 500 yards of shore possibly required and of single-story residences on low ground within two miles of shore.

Category Four (Winds of 131 to 155 miles per hour)

Shrubs and trees blown down. All signs down. Extensive damage to roofing materials, windows, and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes, and/or storm surge 13 to 18 feet above normal tide level. Flat terrain 10 feet or less above sea level flooded inland as far as six miles. Potential for extreme damage. Major damage to lower floors of structures near shore due to flooding and battering of waves and floating debris. Major erosion of beaches. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Evacuations of all residences within 500

yards of shore possibly required and of single-story residences on low ground within two miles of shore.

Category Five (Winds greater than 155 miles per hour)

Shrubs and trees blown down, considerable damage to roofs of buildings; all signs blown down. Very severe and extensive damage to windows and doors. Complete failure of roofs of many residences and industrial buildings. Extensive shattering of glass in windows and doors. Some complete destruction of mobile homes. And/or storm surge greater than 18 feet above normal tide level. Potential for catastrophic damage. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Massive evacuation of residential areas on low ground within 5 to 10 miles of shore possibly required.

Notes:

1. It is important to remember that strong winds and rain will precede the arrival of the storm center several hours before actual landfall.
2. A Category 4 Hurricane is the worst-case storm anticipated to impact Virginia. The tropical and warm water conditions needed to sustain a Category 5 Hurricane generally occur only in more southern latitudes.

**SAFFIR/SIMPSON HURRICANE SCALE
WITH
CENTRAL BAROMETRIC PRESSURE RANGES**

CATEGORY	WINDS (KNOTS)	WINDS (MPH)	CENTRAL PRESSURE MILLIBARS INCHES		SURGE (FEET)*	DAMAGE
1	64 - 83	74 - 95	980+	28.94	4 – 5	MINIMAL
2	84 - 96	96 - 110	965 - 979	28.50 - 28.91	6 – 8	MODERATE
3	97 - 113	111 - 130	945 - 964	27.91 - 28.47	9 – 12	EXTENSIVE
4	114 - 135	131- 155	920 - 944	27.17 27.88	13 –18	EXTREME
5	135+	155+	-920	-27.17	18+	CATASTROPHIC

* Open Water Surge Heights

CONVERSION: 1 KNOT = 1.15 MPH
 1 MPH = 0.87 KNOTS